

Mosley Street Metrolink Station Closure Assessment


Revised Final Report for GMPTE






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EXECUTIVE SUMMARY

GMPTE is expanding and renewing the Metrolink network in Greater Manchester, including new vehicles, new ticket machines and network extensions to Chorlton to the South and Droylsden and Oldham / Rochdale to the north. The new trams will not have retractable steps. To provide step-free level access, as required by the standards prescribed by the Disabled Discrimination Act (DDA), all station platforms have to be provided at a high level (915mm above rail level).

Mosley Street Station is single sided (southbound only) and was strategically positioned to provide an access point to the combined service frequency towards Altrincham within the City Centre¹. It is also the closest stop to the main shopping area for Eccles Line users, without interchanging. The new Metrolink design standards would result in a restricted pavement width of 2.2m wide alongside the 915mm platform covering the length of Mosley Street between York Street and Parker Street. This is considered undesirable in terms of townscape and accessibility and also imposes a significant cost to the project.

GMPTE required a Station Closure Assessment to inform their decision whether to close Mosley Street Station and rebuild the wide pavement to the south side of the tracks. It should be noted that this Station Closure Assessment has been undertaken in line with the Government Guidance, involving appraisal of the business case for **retention** of Mosley Street, with the base scenario assuming **closure** of the station. This means that a positive appraisal outcome would imply a conclusion in favour of retaining the station, whereas a negative outcome implies a preference for closure.

The appraisal revealed a range of slight or significant beneficial and adverse impacts against the identified indicators. The retention of Mosley Street Station would produce some benefits against some policy headings, notably through improved service frequency for Altrincham Line users. However, there will be adverse impacts of station retention, particularly for through passengers. With the existing Metrolink passenger volumes, the adverse impacts are broadly balanced by the benefits (implying that the investment in the new station platform would not be justified). The Metrolink Phase 3 investment will result in a significant increase in the relative numbers of through passengers – meaning that the adverse impacts for through passengers of station retention will outweigh the benefits to Altrincham Line users to a much greater extent.

The economic appraisal therefore **does not support retention** of Mosley Street Station in the future. Furthermore, the technical assessment has shown that for some groups of existing passengers any adverse impacts of station closure are likely to be offset by the increased services and connections that will be offered in future.

The appraisal has highlighted a potential impact associated with station closure in terms of existing passenger perceptions of frequency disbenefits associated with using Piccadilly Gardens or Market Street stations instead of the current Mosley Street station. It is understood that this impact will be mitigated by the provision of additional real-time information screens located in the vicinity of the current Mosley Street station site, as well as at Piccadilly Gardens and Market Street stations, indicating where the next Altrincham Line services will depart from – hence enabling passengers to choose to walk to the most appropriate stop to minimise overall travel times.

¹ The existing service is split between services operating on routes through Victoria Station and Piccadilly Station, and this split will be retained in the future.

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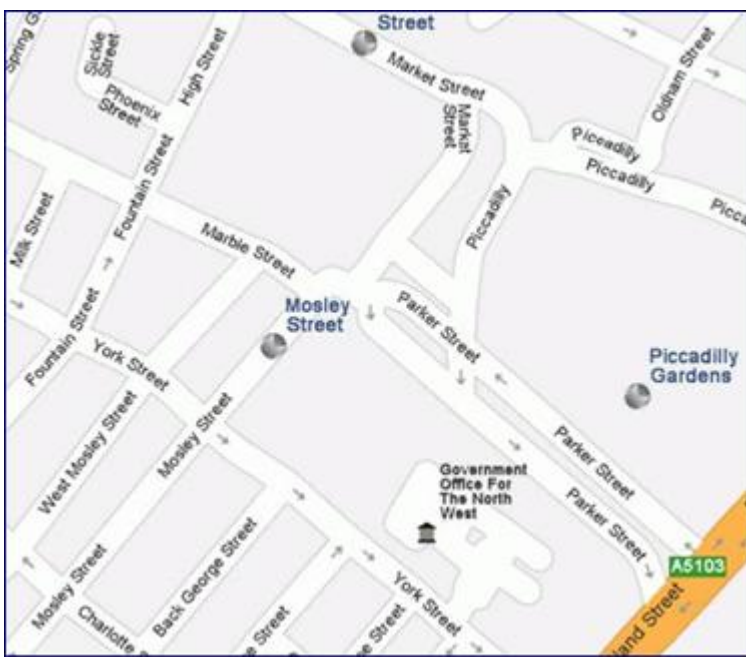
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1 INTRODUCTION

1.1 Background

Mosley Street Station is served by southbound Metrolink services on the Eccles and Altrincham Lines. The single platform on the south side of Mosley Street is of dual height – providing step free access to one door of the Metrolink vehicles. The stop is located in the City Centre between St Peter’s Square and Market Street / Piccadilly Gardens.

Figure 1 Station Location



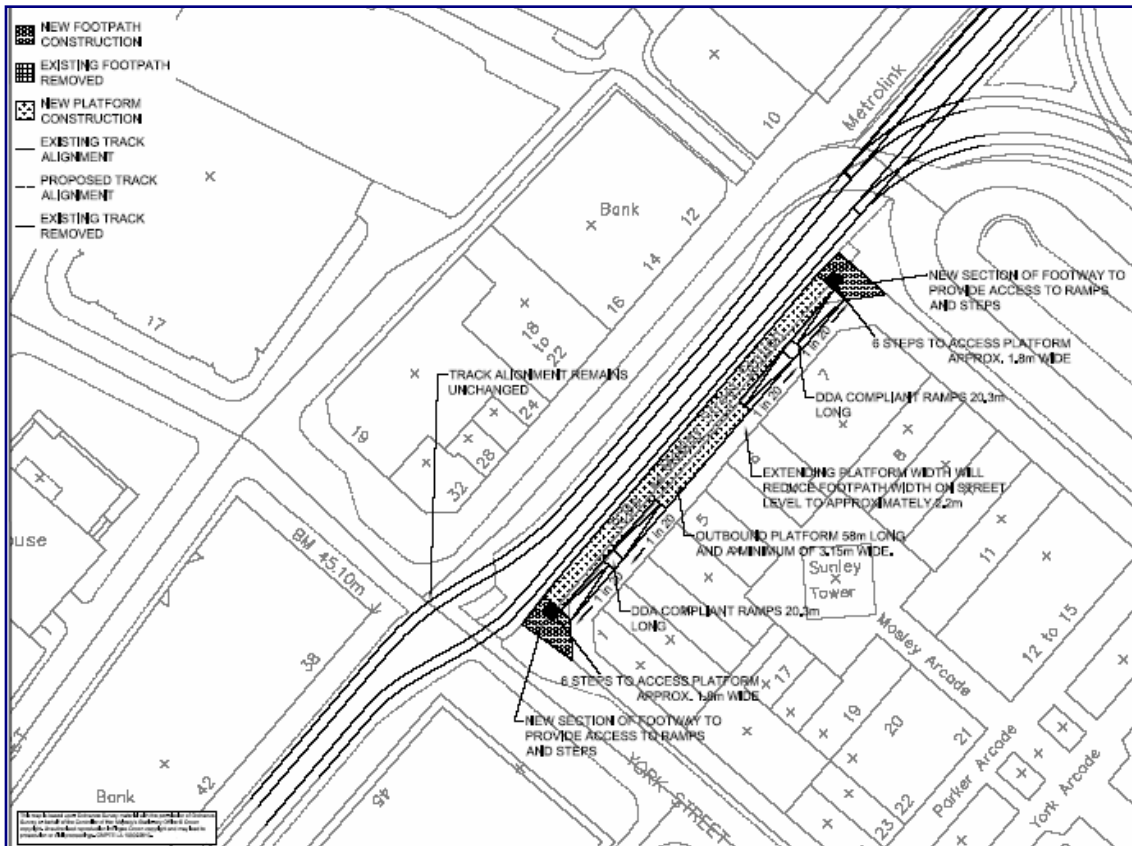
GMPTE is currently implementing the Metrolink Phase 3A improvements which include;

- New vehicles;
- New ticket machines;
- Network extension and new services to Chorlton, and;
- Network extension and new services to Droylsden and Oldham / Rochdale.

The new vehicles will provide for an increase in capacity through lengthening trams but will be high floor and without internal steps (the foldout steps on existing Metrolink vehicles producing maintenance and reliability problems). In addition, the Disability Discrimination Act (DDA) requirements contained within the rail industry station planning criteria require authorities planning any station alterations to provide full step free access to the latest standards.

The design criteria / requirements present problems for the continuation of serving Mosley Street Station. Specifically, the upgrade would require provision of a full length (58m), full width (minimum 3.15m) and high level (915mm above rail level) platform which, with steps from the pavement level and ramps, would produce a ‘tunnel’ between the platform and adjacent commercial businesses (as shown in Figure 2 drawn from the feasibility study report). This would be undesirable. The relatively narrow street prevents a more acceptable design or relocation solution.

Figure 2 Mosley Street Retention Option Design



It is understood that retention of the stop at Mosley Street would cost in the order of £1.2m whilst removal of the stop would cost £0.3m. Thus the closure of the stop could have a significant impact on the costs of the Metrolink enhancement project. As a result of the practical difficulties in designing a suitable replacement facility and in view of the cost implications, GMPTE are considering closure of Mosley Street Metrolink Station, and replacement of the pavement. Mosley Street Station passengers would be forced to use existing stations within the immediate vicinity (around 200m away).

The station closure would be proposed within a package incorporating substantial improvement measures to benefit the communities of Greater Manchester, rather than losing the ability to travel by Metrolink.

1.2 Station Closure Assessment

The DfT has specified before the closure of rail stations an assessment of retention of the station is required within formal procedures. It is understood that the Office of the Rail Regulator (ORR) has indicated that the formal procedures do not need to be followed for the closure of Mosley Street Metrolink Station. However, GMPTE require a station closure appraisal to inform their decision-making processes.

Whilst this tram station closure is proposed within a package incorporating improvement measures to benefit the community, rather than losing the ability to travel by Metrolink, the formal procedures have been followed. However, the level of analysis has to be ‘appropriate to the scale of the proposed closure’² and this assessment includes a simplified appraisal including a qualitative assessment of some factors (e.g. environment).

² Railways Closures Guidance, DfT Oct 2006, Annex A: Appraisal para 74

1.3 Report Structure

Following this introduction, section 2 presents the base scenario and station closure option, section 3 presents the assessment of the station closure option and Appendix A presents the results of the technical assessment and cost benefit analysis and Appendix B presents the appraisal summary table (AST) and Appendix C presents the Transport Economic Efficiency tables.

2 BASE SCENARIO AND CLOSURE OPTION

2.1 Introduction

The Station Closure Guidance requires the assessment to show that reasonable alternatives to closure have been examined and to define the closure proposal in terms of the 'retention' option for comparison against the 'closure' option.

2.2 Policy / Strategy background

Manchester Metrolink was opened in 1992 operating between Bury and Altrincham with and spur to Manchester Piccadilly station. Phase 2, the extension between Eccles and Cornbrook, was opened in 2000. Metrolink has been a huge success in Manchester. It provides high frequency, fast and reliable services into and across the City Centre. The scheme was successful in attracting car users and passenger demand has continued to grow resulting in investment in additional rolling stock and lengthening trams.

Expansion of the Metrolink system is an important part of the future transport strategy of the region, to secure further transfer from cars and to provide higher quality transport to those without access to cars. GMPTE has secured Department for Transport funding for the expansion of the Metrolink network – termed Phase3A – and has recently secured a further package of transport investment in Greater Manchester including further Metrolink extensions – termed Phase 3B. Phase 3A includes capacity improvements on the initial routes including new rolling stock and investment in improved passenger facilities at stations. Phase3A / 3B include extending the network (see Figure 3);

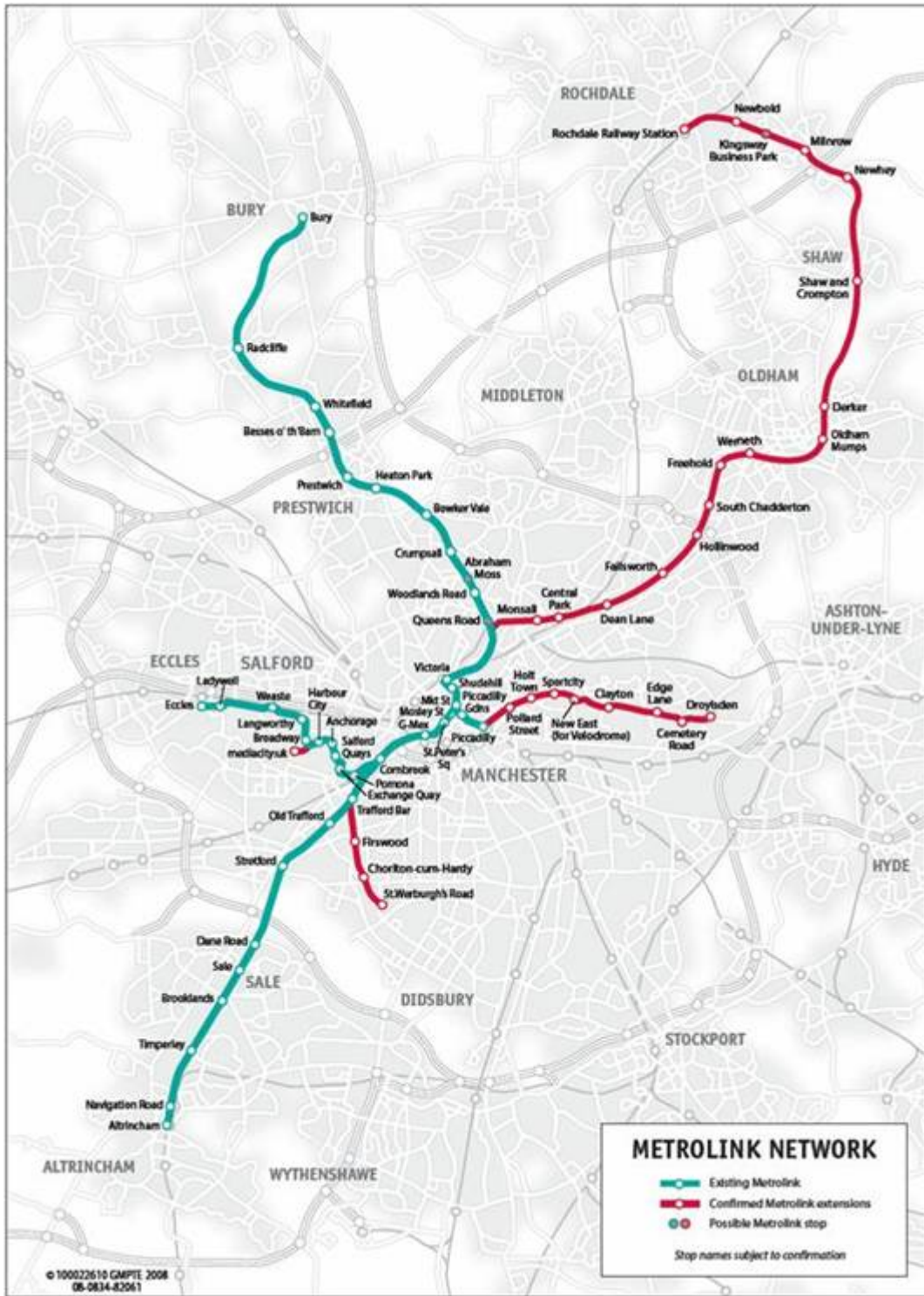
- Between Trafford Bar and Chorlton-cum-Hardy / Stockport;
- Between the Eccles branch and Media City;
- Between Piccadilly Station and Droylsden / Ashton, and;
- Between Victoria Station and Oldham / Rochdale.

As most of the Metrolink network operates over former rail lines a strategic decision was taken to retain the current 'high' platform operation. This minimises costs for the conversion / development of existing stations, but has implications for the provision of stations in City Centres and alongside highways where Metrolink runs on street either with other traffic or in pedestrian areas.

The investment in new rolling stock will enable double length Metrolink services to operate – to solve overcrowding problems. However, the Disability Discrimination Act 1995 (DDA), coupled with the decision that new Metrolink vehicles will not be provided with retractable steps, imposes standards for passenger access involving significant investment, particularly;

- Full Length Platform of 58m;
- Full width platform of at minimum 3.15m;
- Minimum stair width of 1.8m;
- Maximum ramp gradient of 1 in 20;
- Maximum ramp length between 'platforms' 10m;
- Minimum width between ramp handrails 2m.

Figure 3 Metrolink Phase 3A Planned Network Extensions



When these standards are applied to the Mosley Street Station practical difficulties arise as a result of the length of street wide enough for the stop. The resulting design requires ramps to the back of the platform and stairs at each end. The design reduces the pavement to the south of the platform to 2.2m wide.

2.3 Other Technical Options Assessed

It is understood that scoping technical assessments ruled out;

- Moving the platform to the east, as a result of the close proximity of the triangular junction giving access to Market Street and Piccadilly Gardens;
- Moving the platform to the west, as a result of the narrowness of the street beyond York Street, and;
- Moving the platform to the north, as a result of the impact on traffic and in particular bus access to the City Centre.

As there are alternative Metrolink stops in the immediate vicinity GMPTE have not investigated alternative forms of transport to replace Mosley Street Station.

Two initiatives have been suggested to mitigate the loss of the benefits currently provided by the station at Mosley Street;

- Altering the Metrolink service pattern such that Eccles service would operate through to Bury and Altrincham services would all operate through to Piccadilly Station / Droylsden. This would provide the full frequency of service at Piccadilly Gardens but reduce accessibility to the core shopping area (Market Street) from the Altrincham Line and reducing through journey opportunities.
- Providing real-time information displays at key strategic locations in Mosley Street, Piccadilly Gardens and Market Street to indicate from which station the next Altrincham Line tram will depart. This would increase the capital costs and operating / maintenance costs of the closure option.

2.4 Defined Closure Scenario

The base scenario for the evaluation is the Metrolink Phase 3A expansion scheme;

- Existing Metrolink services operating between Bury and Altrincham, Altrincham and Piccadilly Station and Eccles and Piccadilly station, plus;
- Extension of the services currently terminating at Piccadilly Station to Droylsden;
- Additional Metrolink services through the City Centre between Chorlton and Shaw / Rochdale, (operating every 6 minutes through the Centre) and;
- Additional Metrolink services between Cornbrook and Media City (every 12 minutes, providing a 6 minute interval between Cornbrook and Harbour City).

In this scenario Mosley Street Station is removed and the pavement replaced at the existing pavement level, providing a width of 7.5m, at a cost of £300,000.

As a mitigation measure to offset passenger disbenefits associated with station closure GMPTE plan to invest in additional passenger information displays at (the site of) Mosley Street station, as well as at Piccadilly Gardens and Market Street stations to indicate which station the next Altrincham Line tram will depart from.

2.5 Defined Retention Scenario

The retention option involves the service pattern describe above plus;

- Rebuilding Mosley Street Metrolink Station southbound platform at a cost of £1.2m and;
- All southbound Metrolink services calling at the station.

In this scenario there will also be additional operating costs associated with the additional station and short and long term maintenance and renewal of facilities and equipment.

3 ASSESSMENT OF STATION RETENTION OPTION

3.1 Introduction

This assessment has been undertaken in accordance with the Railways Closures Guidance in 2006³ and meets the requirements of the 'objective test' which must be satisfied if closure is to be permitted and includes;

- A quantified Value for Money (VfM) assessment and;
- Presentation of other non-quantified matters that are required to be taken into account.

The basis of the assessment is the same benefit cost ratio (BCR) methodology used in assessing investment proposals, consistent with the New Approach to Appraisal (NATA) embodied within the Green Book, Appraisal and Evaluation in Central Government and Transport Policy, including the 'New Deal for Transport, Better for Everyone', as well as rail specific guidance provided by the DfT Appraisal Criteria. The assessment covers the five criteria with an appropriate amount of technical evidence;

- Environment – 10 sub-objectives including noise, atmospheric pollution, impacts on countryside, wildlife, ancient monuments and historic buildings;
- Safety – reducing accidents and improving security;
- Economy – economic efficiency, reliability and wider economic impacts;
- Accessibility – ability for people to reach different locations and facilities by different modes, and;
- Integration – transport interchange and integration with government policies.

The test to be assessed is defined as per Section 1.5 of the guidance. This states that the test to be assessed is that;

- 'if the benefit of retaining the service, station or network is 1.5 or over... the closure cannot be pursued'.

Section 2.3 of the guidance states that the authority / operation must be satisfied that;

- 'Retention of the rail service, station or network proposed for closure does not represent good value for money compared with the option of closure.'

In this case this is interpreted as the value for money of the retention option compared with the base (closure) scenario.

The assessment has sought to;

- Be independent and objective;
- Highlight any negative aspects of the scheme in comparison to any positive aspects of the scheme; and
- Identify the scale and nature of negative aspects enabling them to be properly taken into the decision making process.

³ Railways Closures Guidance, 18 October 2006.

The assessment has utilised available data and information as much as possible, including published timetable information, passenger surveys and demand data provided by GMPTE. The qualitative assessment has been informed through a site visit undertaken on the 20th May 2009.

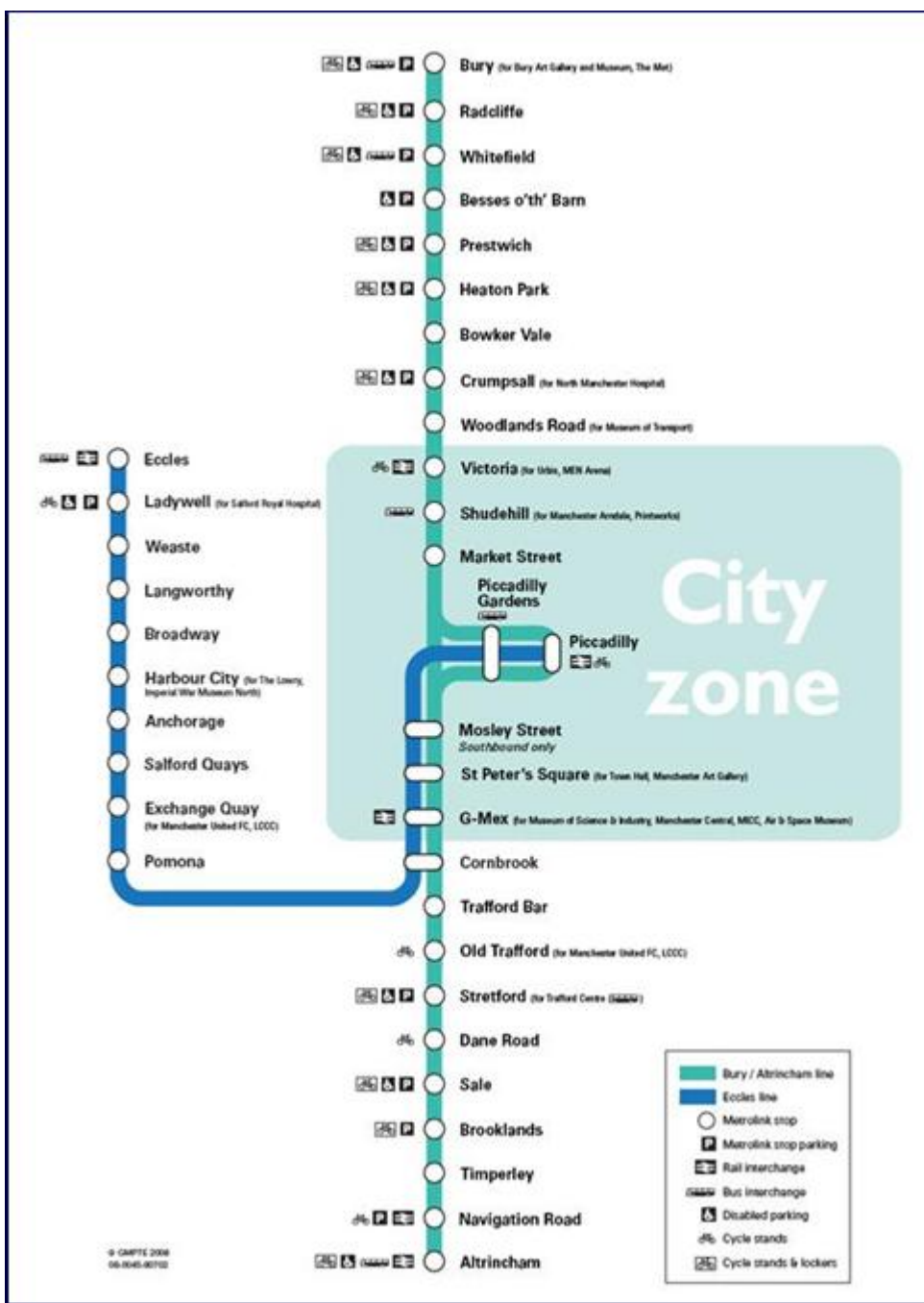
The appraisal of the closure option is described below and summarised in the Appraisal Summary Table (AST) in Appendix B.

3.2 Impacts on Metrolink Passengers

3.2.1 Key Technical Assessment Issues

Figure 4 shows the existing Metrolink network.

Figure 4 Existing Metrolink Network and Stops



The services calling at Mosley Street Station (southbound only) are;

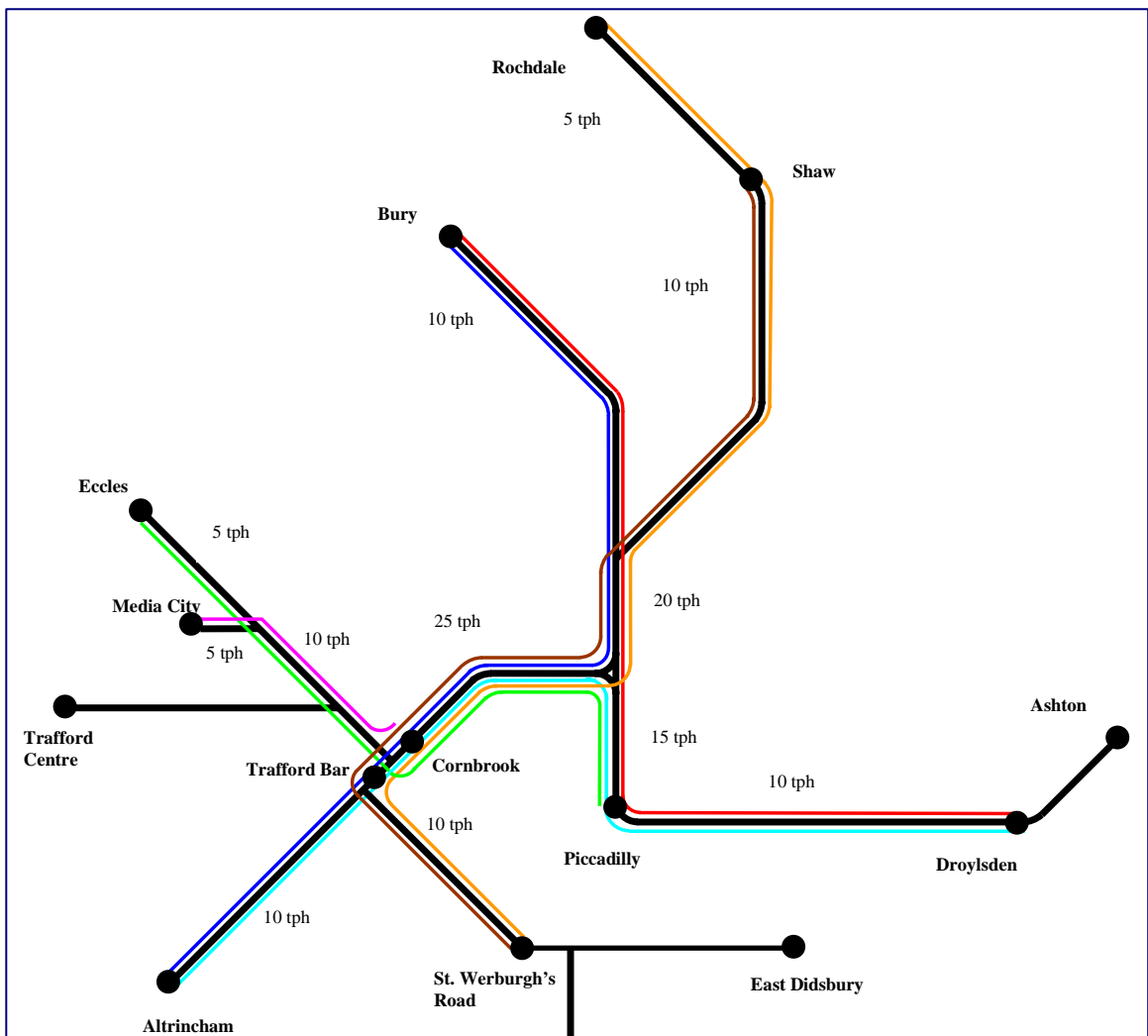
- Piccadilly Station – Altrincham every 12 minutes;
- Bury – Altrincham every 12 minutes; and,
- Piccadilly Station – Eccles every 12 minutes.

The existing split operation of Altrincham Line services between Piccadilly Station and Bury Lines results in Mosley Street being the first station with the combined frequency southbound.

Eccles line services all call at Piccadilly Station and Piccadilly Gardens and all stations to Cornbrook. However, a significant proportion of Mosley Street Station users will be using the Eccles line services as the service does not serve Market Street. People are likely to walk to Mosley Street in preference to Piccadilly Gardens as it is one stop closer to their destination and avoids the need to interchange.

Figure 5 shows that in the future the existing services are planned to remain and an additional service between Chorlton – cum – Hardy (St Werburgh’s Road) will operate at 6 minute intervals to Shaw / Rochdale via Market Street and Victoria. There will also be an additional service at 5 trains per hour between Media City and Cornbrook, increasing the frequency on the section of the Eccles Line to Harbour City to 10 trains per hour but reliant on interchange at Cornbrook to a combined frequency of 25tph from half of the services.

Figure 5 Future Metrolink Service Pattern



At least some passengers travelling south of Cornbrook Station, that would otherwise use Piccadilly Gardens or Market Street Station, currently walk to Mosley Street Station to take advantage of the increased service frequency. For some passengers the walk will be less than the walk to either of the other City Centre stations, while for others the additional walk of 1.5 to 2.0 minutes is made to secure the reduced waiting time – the difference between services every 6 minutes and every 12 minutes.

In addition, in the evening peak when trams are heavily loaded, some passengers that could otherwise use St Peter's Square station may choose to use Mosley Street Station to ensure getting on / getting a seat on the trams.

The removal of the station stop at Mosley Street will lead to a reduction in the journey time of the tram services on both the Altrincham and Eccles services and the future Chorlton service. This will result in time savings to passengers and could also lead to improved reliability of services, producing further passenger benefits. As well as slowing down, waiting at the stop and accelerating the trams currently have to move forward to 'call' the signal to cross York Street and wait for the signal to proceed. Without the station the call would be registered on departure of Piccadilly Gardens station and the combined time saving is estimated as 90 seconds.

The appraisal of the retention of Mosley Street Station needs to assess the impacts on specific groups of passengers;

- Walk time savings for passengers whose journey origins or destinations are closer to Mosley Street than either Piccadilly Gardens, Market Street or St Peter's Square stations.
- Reduced waiting time for Altrincham Line passengers who would otherwise use Piccadilly Gardens or Market Street Stations (minus the additional walk time involved).
- Reduced travel time for Eccles Line passengers who would walk to Mosley Street instead of Piccadilly Gardens or interchanging at St Peters Square or Cornbrook;
- Increased journey time for through passengers travelling beyond Mosley Street Station southbound; and
- Reduced reliability of Metrolink services as a result of the additional stop / potential delay point.

3.2.2 Summary of Demand Impacts

Details of our analysis of demand and user benefit impacts are provided in Appendix A. Summary results are shown in Table 1 below.

Key conclusions from this analysis are that:

- The number of passengers passing through Mosley Street station (who would be adversely affected by the retention of the station) currently exceeds the number of station users (who will benefit) by a factor of between 2 and 3, and that this factor will grow as a result of the implementation of the Phase 3a Metrolink extensions to around 4.

- The average generalised journey time benefits gained by the station users as a result of retaining the station are higher than the average disbenefits experienced by the through passengers, but only by a factor of around 3. Part of the reason why the size of the average benefit for station users is lower than might be expected is that many current users are effectively making a fairly marginal decision in choosing to use this station even though it is not their nearest – i.e. trading off additional walk time against service frequency.
- This means that the net effect of retaining the station is an overall journey time **disbenefit** for Metrolink users. As a result of this, the overall forecast demand change arising from station retention is a small **reduction** in total Metrolink passenger volume, revenues and passenger kms.

Table 1 Demand Impact Summary Effects

	Board at Mosley Street	Alight at Mosley Street	Through passenger at Mosley Street
Base (2008) annual passenger volumes	1.18m	0.14m	3.40m
Growth arising from Phase 3a implementation	+34%	+142%	+120%
Implied (approx) 2016 passenger volumes	1.58m	0.34m	7.48m
Average Passenger Benefit associated with Mosley Street Retention (mins. Gen Time)	4.9 mins	2.6 mins	-1.5 mins
Implied total passenger benefit (mins Generalised Time)	7.9m mins	0.93m mins	-11.22m mins
Estimated net demand change arising from Gen. Time effect (2016 passenger vols)	+129k	+15k	-269k
Implied change in passenger kms from demand change	+1.12m km	+0.99m km	-2.30m km

3.3 Environment

A scoping qualitative assessment of the impact of the station retention option on the environment has considered all sub-headings specified in the NATA guidance with some quantified figures included for the main factors;

3.3.1 Noise

The retention of the Metrolink Stop in Mosley Street will lead to an increase in noise levels associated with the deceleration and acceleration of the trams compared with through running of the trams in the base. However, the level of noise emission is relatively low and the station is surrounded by commercial premises limiting the potential for nuisance impact of additional noise.

In addition, the forecast increase in highway traffic resulting from the modal change forecasts will lead to an increase in traffic noise. However, the impacts are likely to be marginal in relation to background traffic levels and the impacts will be spread over several roads.

During construction there would be some noise in both the base case (to remove the platform and reinstate the pavement) and the retention option but there are no residential premises overlooking station site so the impact would be minimal.

The impact of the station retention is therefore considered to be neutral.

3.3.2 Local Air Quality / Greenhouse Gasses

The station retention will lead to a decrease in Metrolink use and a decrease in Metrolink passengerkms, some of which will involve people transferring to car travel, leading to an increase in vehicle emissions and reduction in local air quality and increase in greenhouse gasses.

The assessment of the quantity of the change in emissions has been made using the Metrolink demand forecasts and assumed proportion of passengers switched to / from road, in line with the Rail Closures Guidance and Webtag Unit 3.13 Guidance on Rail Appraisal. The change in pollutant emissions is shown in Table 2 and is based on the published data on emissions from UK transport sources 1999 (Source, DMRB Vol 11 section 3) and the average emission rates detailed in Transport Statistics Great Britain (2002 edition) and applied to the forecast increase in car kilometres of 259,000 kms per annum.

Table 2 Estimated Change in Pollutant Emissions

Pollutant	Reduction Tonnes per annum
Carbon Monoxide	-1.83
Nitrogen Dioxide	-0.40
Non Methane Hydrocarbons	-0.26
Particulates	-0.02
Carbon Dioxide	-63.59

The important pollutants in local air quality impact assessment are Nitrogen Dioxide and Particulates. The station retention impacts are regarded as slightly adverse.

The value of the local air quality improvements and reduction in greenhouse gasses is based on the Rail Appraisal Guidance and detailed in Appendix A (section h). The financial impacts included in the non user benefits in the economic appraisal are;

- Local Air Quality: -£2,405 in 2008 reducing to -£1,794 in 2025, and;
- Greenhouse Gasses: -£957 in 2008 increasing to -£1,083 in 2025.

During construction there would be some additional emissions through the transport of materials and use of equipment on site. However, there would be some impact in both options.

Overall the assessment of the local air quality and greenhouse gases objective of the station retention option is considered slightly adverse.

3.3.3 Landscape / townscape

In the base scenario the removal of Mosley Street Station will create a 7.5m wide pavement outside the commercial premises. It is assumed that the space under the existing canopy will be utilised for on street café seating outside the commercial premises.

Retention of the station will create a 1m high platform with ramped access for the majority of the length of Mosley Street between Parker Street and York Street. This will form a barrier to movement and force people to cross the streets at either end. The raised platform would be a visual barrier across the street.

In addition, the raised platform would create a relatively narrow 'tunnel' between the Metrolink Stop and the premises to the south and will remove the on-street café seating outside the commercial premises.

Whilst the modern design of Metrolink stops and associated facilities would not be out of character with the commercial premises to the immediate south, it would be out of character with the Victorian premises on the north side of the street.

The retention of the stop is therefore considered to have a significant negative impact on the townscape and no impact on landscape.

3.3.4 Heritage of Historic Resources

The most significant visual impact of retention of the stop would relate to the premises to the south of the platform. These are relatively modern glass-fronted premises so the impact would be negligible. However, to the north of the platform there is a variety of Victorian and more modern premises, 3 of which have ornate architecture of value. The raised platform would present some visual intrusion but have no direct impact on the historic resources.

Within sight of the station – one 'block' to the west is the Portico Library (now a restaurant) with a colonnaded façade. This is a significant distance from the station site so there is no real impact.

There is therefore a neutral impact on the heritage of historic resources.

3.3.5 Biodiversity

As the street is fully paved there would be no identifiable impact on biodiversity of retention of the station.

3.3.6 Water Environment

The street is fully paved and drained at either side of the road. There would be no increased run-off from the station. There would be no identified pollutants.

During construction there is a risk of additional dust and pollutants entering the drainage system, depending on the materials used and construction methods. However, there would be some works in both the base case and retention options and therefore minimal difference.

3.3.7 Physical Fitness

The technical assessment forecast a reduction in use of Metrolink as a result of retaining the station leading to a loss of through journeys greater than the increase in Mosley Street Station use by around 125,000 passengers per annum. Some of these passengers will transfer to car (around a fifth) and is likely to lead to a decrease in walking to access stations at either end of the journey. This will have a slight impact on the physical fitness of those travellers.

The key factor in the assessment of physical fitness is encouraging people to walk for 30 minutes per day. Many passengers who choose to use Metrolink instead of driving to their destination would have walked to and from the stations at both ends of their journeys. From the assessment of lost patronage and assumed modal split we have estimated that around 138 persons per day would lose this health related benefit. Overall this is a slight adverse impact.

3.3.8 Journey Ambience

The Transport Appraisal Guidance for the assessment of this objective focuses on measures under the control of network providers and operators;

- Traveller Care
- Travellers' Views, and
- Traveller Stress

(a) Traveller Care

The guidance notes that improvement to stations is covered by the Interchange objective and the measure of this objective is therefore on vehicles and covers cleanliness, facilities, information and environment. The station closure will have no impact on the quality of the vehicles.

(b) Travellers' Views

This relates to the attractiveness of the general travelling environment. In the base scenario the removal of Mosley Street Station will remove the stop point and also the delays due to the junction at York Street providing a smooth through journey between Piccadilly Garden and St Peter's Square.

The retention option will result in the slowing of the trams in Mosley Street to call at the station and call for the priority through the signal junction. This will apply to all through passengers (totalling 3m in 2006 and estimated as 6m per annum in the future with the expansion of the network). There will be slightly worsened travellers views, which will have a small overall impact on the travelling environment.

(c) Traveller Stress

This relates to the mental and physiological effects including frustration, fear of potential accidents and route uncertainty.

The retention of Mosley Street Station means that;

- Some passengers will have a shorter walk to access Metrolink;
- Some passengers will walk further to access Metrolink to secure a higher level of service – and reducing waiting times with inherent stress;
- Some passengers will walk further to access Metrolink to avoid the need to interchange to complete their journey, and therefore reduce travel stress associated with connection times and risks;
- Many passengers will have a longer journey time as a result of the extra stop and resultant delays;
- There will be a reduction of stress associated with missing the first service to passengers' destinations as a result of having to choose a station in the base – retention of the stop would produce an increase in route certainty;

Some of the benefits of the retention of Mosley Street Station can be secured in the base through the provision of Real-Time Passenger information at stations and at strategic locations in the City Centre proposed as part of the scheme.

Table 3 summarises the journey ambience impacts.

Table 3 Journey Ambience Impact Worksheet – Station Retention Option

Factor	Sub-Factor	Better	Neutral	Worse
Traveller Care	Cleanliness		✓	
	Facilities		✓	
	Information		✓	
	Environment		✓	
Travellers' Views	-			✓
Traveller Stress	Frustration	✓		
	Fear of potential accidents		✓	
	Route Uncertainty#	✓		

It is possible that the 'nearest station' real-time passenger information screens around Piccadilly Gardens could have the effect of reducing this impact to 'neutral'.

Given the estimated passenger numbers involved (around 3,500 per day), this leads to an assessment of the journey ambience benefit of the retention option as being moderate (significant), although this could be reduced to a slight effect with the proposed Passenger Information Displays.

3.4 Safety

There are two sub-headings to consider under this objective, accidents and security;

3.4.1 Accidents

There is a forecast decrease in Metrolink use as a result of retention of the stop and therefore transfer of trips to the highway network and a consequent increase in the incidence of road traffic accidents. The value of these is included within the non-user benefits of the economic appraisal but the methodology employed does not produce a quantified value for the number of accidents. The assessment also includes for a decrease in Metrolink accidents as a result of reduced Metrolink use.

3.4.2 Security

Whilst some passengers will have reduced walk distances to reach the Metrolink station others would walk further to take advantage of the combined frequency at Mosley Street Station. However, there is no perceived security concern at Mosley Street Station or the alternative locations. It is concluded that there is no appreciable impact on passenger security.

3.5 Economy

There are three sub-objectives to consider, transport economic efficiency, reliability and wider economic impacts;

3.5.1 Transport Economic Efficiency

The quantification of the transport economic efficiency has been based on the analysis of Mosley Street Station passenger surveys undertaken in February 2008, analysis of existing passenger data for 2006 and analysis of forecast Metrolink Phase 3a passenger data. The quantified economic appraisal is detailed in Appendix A and reveals a Benefit to Cost Ratio of -1.24 which suggests that the retention option does not represent good value for money and does not meet the DfT's requirements for scheme investment.

3.5.2 Reliability

The introduction of the additional Metrolink stop, and lack of priority expected at the signals at York Street, is expected to lead to an increase in the probability of delays and therefore reduction of reliability in the retention option. However, passenger surveys reveal 90% satisfaction with Metrolink reliability so this is not a critical issue and the impact is considered only likely to be slightly adverse.

3.5.3 Wider Economic Impacts

The local and regional policy is focused on securing sustainable development, regeneration and reduction of congestion through encouragement of the use of public transport. This objective relates to wider economic impacts resulting from the retention option.

It is noted that there are existing commercial premises alongside the Mosley Street Station which probably benefit from the passing trade that the stop generates. However, without the stop there would be a wide pavement outside these premises and the ability to create pavement seating outside the cafés. With the retention of the stop an unattractive narrow and enclosed pavement will be created outside the commercial premises which may put companies off investment.

Metrolink provides high quality public transport access to and from the regional centre and the retention of the stop has three impacts;

- Lengthening the southbound through journeys for people travelling out of the regional centre and;
- For those travelling on the Altrincham Line with journey origin in the vicinity of the stop the stop creates an access point with the combined frequency – reducing waiting times.
- For those travelling on the Eccles Line with journey origins outside the immediate vicinity the stop removes the need to interchange.

The economic appraisal suggested that the through trips at least balance the other trips leading to a net neutral impact.

Some of the adverse economic impact could be overcome through improved signing in the city centre – specifically, additional electronic real-time information displays enabling people to know which stop the next tram will depart from.

3.6 Accessibility

There are three aspects to consider – option values, severance and access to the transport system;

3.6.1 Option Values

As the trams currently serving Mosley Street Station call at Piccadilly Gardens or Market Street Stations around 200m away the option to travel by tram to locations on the Metrolink network remains. Therefore there is little impact on option values produced by the station closure / retention.

3.6.2 Severance

The railway closures guidance notes that severance is unlikely to be relevant to closure proposals and need not be included in assessments.

There will be a local severance impact in the retention option as passengers will be forced to cross Mosley Street at either end between York Street and Parker Street.

3.6.3 Access to the Transport System

The measurement of the change in access to the transport system is defined as non car owning households living within 800m (2km in rural areas) of the station proposed for closure and without alternative public transport provision.

Appendix A shows the catchment analysis and analysis of alternative public transport services. The analysis showed that all locations within 800m of Mosley Street Station lie within 800m of an alternative Metrolink station. There are also substantial alternative public transport services available to all of the destinations served by the Metrolink services. The overall impact of closure / retention is considered minimal.

In terms of accessibility for mobility impaired passengers, the additional access point to the Metrolink network in the retention option represents a slight improvement. The retained stop would be designed to the accessibility standards required by the Disability Discrimination Act and would provide level access to all doors of the Metrolink vehicles. This would also be a slight improvement.

3.7 Integration

This objective has three sub-objectives – interchange; land-use policies and proposals, and; wider Government Policy such as environmental sustainability, health and rural policy.

3.7.1 Interchange

Improving interchange is a major factor in achieving a truly integrated transport system – a key objective of UK transport policy. This qualitative assessment of the Interchange sub-objective has been undertaken in line with the transport appraisal guidance⁴. The guidance lists a series of passenger indicators and standards which are summarised in Table 4 in terms of the base (closure) option and the retention of Mosley Street Station, assuming that the retention of the station would redistribute Metrolink passengers in the City Centre.

⁴ WebTAG unit 3.7.1

There is very little difference between the options according to the description of the issues to be considered in the guidance. Whilst the ‘connection time and risk of missing a connection’ indicator relates to timetables, the table shows a slight difference relating to the convenience of the combined timetable offer closer to the core of the city centre by the retention option and potential for improved onward journeys (for example interchanging to rail at Altrincham).

Table 4 Integration – Passenger Interchange Assessment

Passenger Interchange Indicator	Base (Closure) option	Retention Option
Waiting Environment	Moderate / high	Moderate / high
Level of facilities	Moderate	Moderate
Level of Information	Moderate / high	Moderate / high
Visible Staff Presence	Poor	Poor
Physical linkage for next stage of journey	High	High
Connection time and risk of missing a connection	Moderate	High

There is therefore slight overall improvement in interchange quality for passengers wishing to travel between the City Centre and stations between Trafford Bar and Altrincham. There is also a slight improvement for passengers travelling to the Eccles Line from the Market Street area – walking to Mosley Street Station to avoid the need to interchange. However, the improvement of service frequencies following the Phase 3 investment offsets this existing benefit for some passengers.

3.7.2 Land-use Policy

The qualitative assessment is undertaken against the local, regional and national policies in terms of the number of policies supported compared to those that would be adversely affected.

(a) National Policies

In November 2008 the Department for Transport (DfT) published their transport strategy – ‘Delivering a Sustainable Transport System (DaSTS), including specification of the Governments’ five goals for transport;

- to **support** national **economic** competitiveness and **growth**, by delivering reliable and efficient transport networks;
- to reduce transport’s emissions of carbon dioxide and other greenhouse gases, with the desired outcome of **tackling climate change**;
- to **contribute to better safety, security and health** and longer life expectancy by reducing the risk of death, injury or illness arising from transport, and by promoting travel modes that are beneficial to health;
- to **promote** greater **equality of opportunity** for all citizens, with the desired outcome of achieving a fairer society; and
- to **improve quality of life** for transport users and non-transport users, and to promote a **healthy natural environment**.

Appraisal against the DfT’s objectives is effectively covered by the NATA assessment.

(b) Regional Policies

The Government Office for the North West published the Regional Spatial Strategy (RSS) for North West England in 2008. This encompasses the Regional Transport Plan (RTP). It provides a framework for development and investment in the region over the next fifteen to twenty years and establishes a broad vision for the region and its sub-regions, priorities for growth and regeneration, and policies to achieve sustainable development across a wide range of topics – from jobs, housing and transport to climate change, waste and energy.

Policy DP 1 presents the 'Spatial Principles' which underpin the RSS;

- promote sustainable communities;
- promote sustainable economic development;
- make the best use of existing resources and infrastructure;
- manage travel demand, reduce the need to travel, and increase accessibility;
- marry opportunity and need;
- promote environmental quality;
- mainstreaming rural issues;
- reduce emissions and adapt to climate change.

The Regional Transport Strategy (RTS) embraces the spatial principles and the regional and sub-regional spatial frameworks (policy RDF1) and sub regional policies. In particular it seeks to:

- maintain existing transport infrastructure in good order;
- improve journey time reliability, tackle congestion and overcrowding in the region's main transport corridors shown on the Key Diagram, particularly within and between City Regions;
- secure a shift towards the use of more sustainable modes of transport;
- secure safe and efficient access between residential areas and key destinations, including centres of employment, schools, shops and other services;
- improve surface access and interchange arrangements at the international, national and regional gateways;
- reduce the adverse impacts of transport, in terms of safety hazards, climate change, environmental degradation, residential amenity and social exclusion;
- integrate the management and planning of transport systems.

Policy RT1 relates to Integrated Transport Networks including improving journey time reliability in key inter-regional transport corridors and enhancing the accessibility of the regions gateways and interchanges.

Reliability is covered under the Economy heading. In terms of enhancing accessibility of the regions gateways and interchanges the retention of the stop does not significantly alter the level of accessibility of the regional centre by Metrolink and the stop is not an identified key interchange. There will be some positive and negative local and regional impacts of the closure but overall of small impact against the objective.

Policy RT2 relates to Managing Travel Demand, in particular reduction in the proportion of car-borne commuting.

The retention of the stop is forecast to lead to a loss of Metrolink trips compared to the closure option and an increase in car use. The impact on congestion will be slightly adverse.

Policy RT3 relates to the Public Transport Framework and defines the North West's main regional public transport corridors and hierarchy of gateways and interchanges. Manchester Piccadilly Station and other Central Manchester Railway and bus stations are identified as important regional gateways. The policy 'encourages local authorities to introduce measures to enhance accessibility by public transport to the regional centres. Proposals should include priority measures to improve journey time reliability' (though the corridors identified do not include the Metrolink corridors). 'Interchange and service improvements should be supported by better information provision, marketing and integrated ticketing.'

The retention of the station at Mosley Street can be seen as contributing the enhancing accessibility by public transport though the benefit in the locality is offset by the disbenefit in journey time for people with origins outside the immediate vicinity of the stop.

(c) Local Policies

Local Policies are presented in the Second Greater Manchester Local Transport Plan (LTP) (2006) and include a vision statement and 8 policy themes;

"Sharing the Vision, A Strategy for Greater Manchester", was published in 2003 by the Association of Greater Manchester Authorities. It has a shared agenda for the future of Greater Manchester and is supported by all the key agencies in the conurbation. By 2020, Greater Manchester aims to be:

- a creative and successful European Regional Centre with a strong knowledge driven economy recognised as a great place to build a business, to live in and to visit.
- a conurbation which is leading the wider north west region to greater levels of prosperity and which is helping to close the gap in prosperity between the north and the south.
- a place with a quality of environment, both built and natural, second to none.

'Sharing the Vision' is founded on eight key themes;

Theme 1. Promoting a dynamic economy – Key actions include:

- Reviewing the location of sites and their access requirements to nurture and attract growth-sector industries, with a particular emphasis on seeking to develop strategic sites in such a way as to minimise their impact on transport networks and to be accessible by the more sustainable modes.
- Improving surface access by the more sustainable modes to Manchester Airport to support the growth forecasts and policy direction set out in the Aviation White Paper, and support the development of its ground transport strategy.
- Improving accessibility so that the benefits and opportunities of new development and economic growth are available to all parts of the community.
- Improving awareness and take-up of e-commerce to help to reduce the need to travel.

The Mosley Street Station retention would have little impact on these actions.

Theme 2. Enhancing the Regional Centre – Key actions include:

- Improving access to Manchester Airport by more sustainable modes to support a critical mass of internationally competitive growth sectors.
- Improving the radial bus, Metrolink and rail corridors to support the Regional Centre's potential to become the physical location of a world-class Knowledge Capital.

- Improving connectivity, particularly by public transport, between the Regional Centre and other key centres to ensure that the benefits of economic growth in the Regional Centre are spread across Greater Manchester. This will be achieved through the Corridor Partnership approach which seeks to develop an integrated public transport and congestion management strategy for each corridor through partnership working of stakeholders. This should improve the efficiency and effectiveness of public transport.

The Mosley Street Station retention would have both positive and negative impacts on the action to improve radial Metrolink corridors to support the regional centre.

Theme 3. Promoting culture, sport and tourism - Key actions include:

- Improved access to Manchester Airport (which will be important to facilitate increases inbound tourism), the Regional Centre and to District Centre destinations by public transport to facilitate sustainable tourism, retail and leisure movements.
- High quality public transport access to football and cricket stadia and other sports complexes to encourage more sustainable travel Improvements in public transport access to river valleys, forest parks and open countryside close to the urban area and development of Rights of Way Improvement Plans.
- Improved accessibility by more sustainable modes to local leisure centres or community centres.

Mosley Street Station is convenient for access to the Portico Library and Art Gallery and Chinatown from the North and for interchange from buses at Piccadilly Gardens for travel south to Old Trafford and Salford Keys. The increase in the frequency of service proposed in Phase 3 will offset some of these impacts, however, retention of the station will have a slight positive impact on this action.

Theme 4. Improving Connectivity - Key actions include:

- Partnership with regional bodies, and other agencies, leading to the identification of strategic transport priorities for the North West region.
- Improving surface access to support the growth of Manchester Airport's role as an economic key driver for the city-region and the North West.
- Development of affordable options for increasing rail capacity for commuters.
- Delivery of a continued programme of public transport improvements including extensions to Metrolink and Quality Bus measures.
- Promoting local transport solutions to problems of access to healthcare, education and training, leisure and culture, job opportunities and to meet specific community needs in partnership with local authorities, communities, health, education and training providers, employers and regeneration agencies.
- Working with the Government and transport operators to seek solutions to enable bus provision to better meet the needs of socially excluded communities.
- Developing a Greater Manchester e-Government Strategy.

Retention of Mosley Street Station will add to the costs of extending the Metrolink network but will provide benefits for passengers on the Altrincham line interchanging with buses at Piccadilly Gardens and Cross Street.

Theme 5. Raising levels of education and skills - Key actions include:

- Improving access to jobs and training opportunities, for example to the Knowledge Capital area.
- Reducing transport barriers to new businesses.
- Improving accessibility by more sustainable modes to and reducing the impacts of travel to school and further education.

Retention of Mosley Street Station will have a slight impact on passengers from The University of Salford through improving interchange for travel to locations on the Altrincham Line.

Theme 6. Creating sustainable communities - Key actions include:

- Contributing to the creation of better living and working environments which are sustainable, for example Neighbourhood Renewal, Housing Market Renewal and other housing action areas, by land-use planning which minimises the need to travel and by enhancing accessibility by non-car modes.

Retention of Mosley Street Station will have no impact on this objective.

Theme 7. Reducing Crime - Key actions include:

- Introducing measures which combat fear of crime in design of local transport networks and on public transport.
- Implementing a range of safety measures.

Retention of Mosley Street Station will have no impact on this objective.

Theme 8. Improving Health and Healthcare services- Key actions include:

- Ensuring good access by more sustainable modes to existing and re-organised health facilities, including travel planning and parking control measures, and by encouraging more walking and cycling as healthier forms of travel.
- Working with Health Authorities to ensure that transport is considered when they develop their plans and programmes.

Retention of Mosley Street Station will have limited impact on this objective.

3.7.3 Other Government Policies

The scheme has no impact on rural policy.

4 CONCLUSIONS

The Station Closure Assessment appraises retention of Mosley Street Station against the base (closure) scenario. The Appraisal Summary Table (AST) in Appendix B summarises the quantifiable and non quantifiable impacts and reveals slight or significant beneficial and adverse impacts against most of the identified indicators.

Whilst the retention of Mosley Street Station would produce some benefits against some policy headings, for Altrincham Line users in particular, there will be adverse impacts for through passengers. The adverse impacts are forecast to outweigh the benefits implying that retention of the station is not justified, and supporting the case for closure of the station.

There will be a significant increase in through passengers generated from the Metrolink Phase 3 investment, further outweighing the benefits to Altrincham Line users of station retention in the future.

The economic appraisal does not support retention of Mosley Street Station in the future and the technical assessment has shown that for some groups of passengers the adverse impacts may be offset from the increased services and connections that will be offered in future.

In addition, GMPTE propose to increase the costs of the base case (closure) option slightly to mitigate the main adverse impacts of the station closure, through the provision of additional real-time information screens in the vicinity of Mosley Street, Piccadilly Gardens and Market Street to indicate where the next Altrincham Line services will depart. This will enable passengers to choose to walk to the most appropriate stop to minimise overall travel times. The additional capital cost estimated as around £10,000, would have no significant impact on the economic appraisal and would represent an overall worthwhile investment within the Station Closure scenario – helping to offset passenger criticism and enabling GMPTE to maximise the benefits of the Metrolink Phase 3 investments.

APPENDIX A TECHNICAL ASSESSMENT

A1 Introduction

This technical assessment provides the quantification of the key aspects of the appraisal including the assessment of the key demand and revenue impacts, benefits / costs and economic appraisal for the value for money assessment.

A2 Existing station demands

In February 2009 GMPTE commissioned passenger interviews and boarding and alighting counts at Mosley Street Station to provide the base data for the analysis of the station closure issues. This was also used to assist in the disaggregation of the ticket sales data as the City Centre stations are treated as one destination. Table 5 shows the key station flow data from the surveys.

Table 5 Existing Mosley Street Station Flows

Time Period	Weekday Boarders	Weekday Alighters	Time Period	Saturday Boarders	Saturday Alighters
0700 – 1000	808	184			
1000 – 1300	455	74	0900 – 1200	3112	82
1300 - 1600	745	59	1200 – 1500	656	112
1600 – 1900	1,508	75	1500 - 1800	1,056	118
Total	3,516	392		2,024	312

Table 6 shows the top 10 flows from Mosley Street Station from the ticket sales data adjusted on the basis of the February 2009 boarding and alighting counts provided by GMPTE. The top 10 flows represent 75% of all trips southbound from Mosley Street Station.

Table 6 Top 10 Flows from Mosley Street Station

Destination Station	Annual Trips
Altrincham	152,600
Sale	124,876
Stretford	96,678
Brooklands	90,825
Old Trafford	76,791
Trafford Bar	69,180
Eccles	64,921
Salford Quays	44,817
Navigation Road	44,046
Timperley	42,816

A3 Station Catchment Assessment

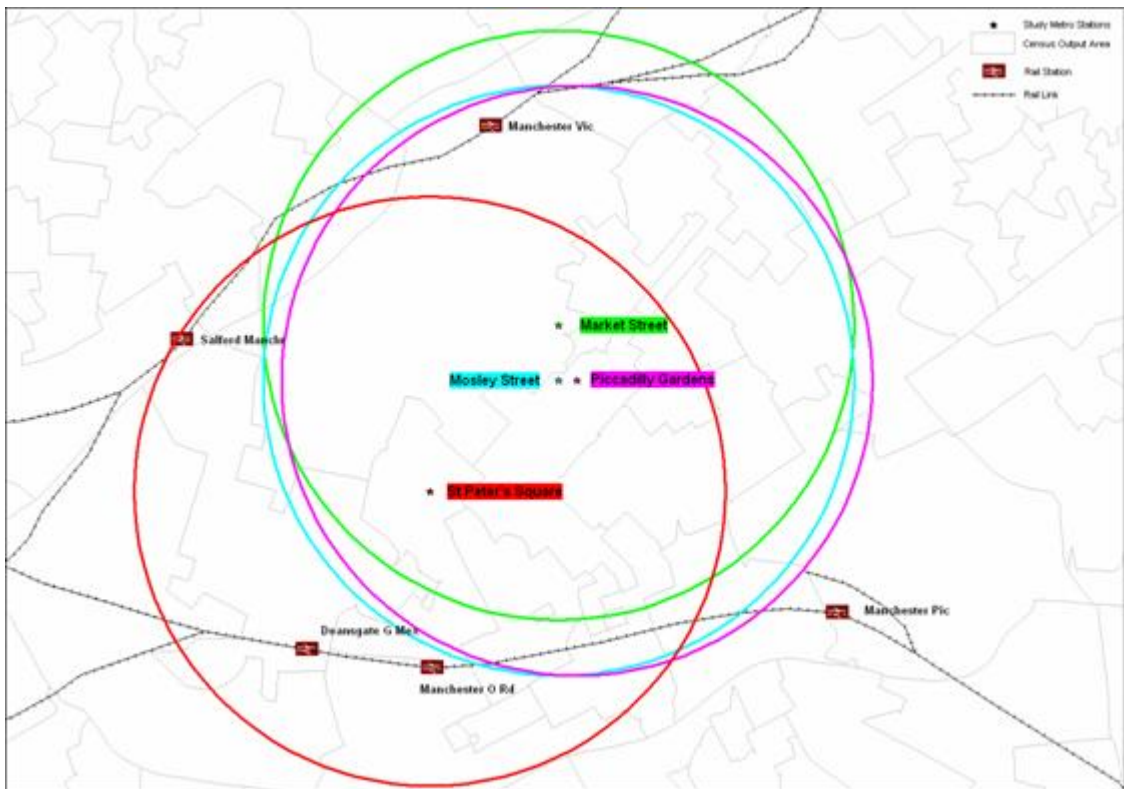
Table 7 shows the results of the station catchment assessment which used Mapinfo GIS to assess the 2001 Census information for 800m catchment of Mosley Street Station.

Table 7 Station Catchment Area Data

	Mosley Street Station
0 car owning households within 800m	962
Households within 800m	1,666
Population within 800m	3,131

Figure 6 below indicates the 800m catchment of Mosley Street Station. The catchment covers most of the core of the City Centre between Manchester Victoria, Piccadilly and Oxford Road stations. Whilst there are almost 1,000 households without access to a car within the catchment of the station, Figure 5 shows that all of the 800m catchment for Mosley Street Station is covered by the 800m catchments of the other Metrolink stations. There is therefore no identified severance issue related to the station closure.

Figure 6 Metrolink Stations 800m catchments.



A4 Existing Bus Network

Table 8 shows the termini and frequency of buses serving the stations between Trafford Bar and Altrincham from Manchester City Centre. Most buses operate from Piccadilly Gardens via Portland Street with the 264 operating from Shude Hill via Corporation Street and Cross Street to the northwest of the City Centre. The 263 service which serves the catchments of all stations in the Metrolink corridor operates at a similar frequency to Metrolink. In addition, most stations are served by a number of other radial services showing that the catchment of Mosley Street Station has significant other travel opportunities.

Table 8 Existing Bus Services

Station	Bus Service	Terminus	Frequency		Via
			Peak	Interpeak	
Trafford Bar	84	Piccadilly Gardens	2	2	Portland Street
	253	Piccadilly Gardens	2	0	Portland Street
	250	Piccadilly Gardens	0	4	Portland Street
	263	Piccadilly Gardens	5	6	Portland Street
Old Trafford	84	Piccadilly Gardens	2	2	Portland Street
	255	Piccadilly Gardens	2	2	Portland Street
	256	Piccadilly Gardens	5	6	Portland Street
	250	Piccadilly Gardens	0	4	Portland Street
	263	Piccadilly Gardens	5	6	Portland Street
	290	Piccadilly Gardens	1	0	Portland Street
	264	Shude Hill	2	0	Cross St, Corporation St
Stretford	15	Piccadilly Gardens	3	4	Portland Street
	255	Piccadilly Gardens	2	2	Portland Street
	256	Piccadilly Gardens	5	6	Portland Street
	16	Piccadilly Gardens	3	2	Portland Street
	263	Piccadilly Gardens	5	6	Portland Street
	264	Shude Hill	2	0	Cross St, Corporation St
Dane Road	16	Piccadilly Gardens	3	2	Portland Street
	263	Piccadilly Gardens	5	6	Portland Street
	99	Piccadilly Gardens	0	1	Portland Street
Sale	16	Piccadilly Gardens	3	2	Portland Street
	263	Piccadilly Gardens	5	6	Portland Street
	41	Piccadilly Gardens	5#	5	Portland Street
	99	Piccadilly Gardens	0	1	Portland Street
	264	Shude Hill	2	0	Cross St, Corporation St
Brooklands	99	Piccadilly Gardens	0	1	Portland Street
	41	Piccadilly Gardens	5	5	Portland Street
	263	Piccadilly Gardens	5	6	Portland Street
Timperley	16	Piccadilly Gardens	3	2	Portland Street
	41	Piccadilly Gardens	5	5	Portland Street
	263	Piccadilly Gardens	5	6	Portland Street
Navigation Road	16	Piccadilly Gardens	3	2	Portland Street
	41	Piccadilly Gardens	5	5	Portland Street
	263	Piccadilly Gardens	5	6	Portland Street
	Train	Piccadilly Station	1	1	
Altrincham	16	Piccadilly Gardens	3	2	Portland Street
	263	Piccadilly Gardens	5	6	Portland Street
	41	Piccadilly Gardens	5	5	Portland Street
	264	Shude Hill	2	0	Cross St, Corporation St
	Train	Piccadilly Station	1	1	

Run by Finglands & Stagecoach, uneven interval between peak services.

A5 Comparison of Metrolink and Bus Journey Times

Table 9 provides a comparison of Metrolink and bus journey times for key destinations in the corridor. Metrolink provides a significant journey time advantage over buses, however, as buses have more stops, they could provide a shorter distance to the real destination of many trips. Passengers choosing to use Metrolink will take into account access and egress to Metrolink stops compared to buses.

For example, the addition of a 5 minute walk at either end of the Metrolink journey would outweigh the journey time advantage at Stretford and the perceived journey times (with walking time doubled) would make a significant difference to the decision making at Sale and Altrincham, especially when fares are taken into consideration.

Table 9 Existing Bus and Metrolink Journey Characteristics

	Metrolink (Mosley St)	Bus Service 263	Bus Service 16
Stretford	11 mins	20 mins	30 mins
Sale	14 mins	31 mins	39 mins
Altrincham	22 mins	51 mins	68 mins

A6 Passenger Survey Results

In February 2009 GMPTE commissioned passenger interviews and boarding and alighting counts at Mosley Street Station to establish origins and destinations for assessing the impact of the potential station closure. Table 10 shows the summary statistics;

Table 10 Passenger Survey Summary

Date	Boarding Interviews (sample rate)	Alighting Interviews (sample rate)
12 th February 2009	410 (12%)	22 (6%)
14 th February 2009	331 (16%)	23 (7%)

Using the grid references of the Metrolink station locations (Market Street, Piccadilly Gardens, Mosley Street and St Peters' Square) and the grid references of the postcodes within the passenger journey data, the distance between the Metrolink stations for the origins of passengers boarding at the station and the destinations of passengers alighting at the station were computed. It was noted that some passengers' origins / destinations were outside the immediate catchment of the stations. These were analysed and most concluded to be interchange trips. However, some passengers provided their origin instead of destination (and vice versa). Table 11 shows the records assessed and records deleted from the analysis.

Table 11 Passenger Data Cleaning

Survey Date	Flow	Survey Records	Not within 1km of Central stations	Deleted Records
12 th February 2009	Boarding	410	32	4
	Alighting	22	1	1
14 th February 2009	Boarding	331	9	4
	Alighting	23	1	0

The interview records were expanded to represent the total trips in the boarding counts taking account of the group size, time period and direction in the weekday survey. The alighting records were expanded by group size and an average factor for the survey day due to the smaller number of records.

The records were ordered by line according to the stated destination stations. The breakdown is shown in Table 12.

Table 12 Breakdown of Mosley Street Station Users by Line

	Weekday	Saturday
Eccles Line Boarders	1,194	705
Combined Section Boarders	185	151
Altrincham Line Boarders	2,133	1,129
Other Boarders	-	32
Total Boarders	3,513	2,019
Alighters	392	312

Tables 13 and 14 shows the breakdown of the passenger boarding data according to the closest existing station and closest station if Mosley Street Station is closed for Weekdays and Saturdays. The distances were calculated based on the straight line distances (using the postcode and station grid references). Interchange trips were adjusted to reflect the closest station to their bus stop.

Table 13 Weekday Boarders' Nearest Station With and Without Mosley St

Line Section	Closest Existing Station		Without Mosley St	
Altrincham Line	Market Street	366		
	Piccadilly Gardens	220		
	Mosley Street	375	Market Street	70
			Piccadilly Gardens	188
			St Peters Square	116
	St Peters Square	1,172		
Combined Section	Market Street	33		
	Piccadilly Gardens	23		
	Mosley Street	5	Market Street	0
			Piccadilly Gardens	5
			St Peters Square	0
	St Peters Square	124		
Eccles Line	Market Street	329		
	Piccadilly Gardens	90		
	Mosley Street	265	Market Street	63
			Piccadilly Gardens	127
			St Peters Square	75
	St Peters Square	512		

Table 14 Saturday Boarders' Nearest Station With and Without Mosley St

Line Section	Closest Existing Station		Without Mosley St	
Altrincham Line	Market Street	472		
	Piccadilly Gardens	45		
	Mosley Street	128	Market Street	0
			Piccadilly Gardens	120
			St Peters Square	9
	St Peters Square	483		
Combined Section	Market Street	44		
	Piccadilly Gardens	5		
	Mosley Street	0	Market Street	0
			Piccadilly Gardens	0
			St Peters Square	0
	St Peters Square	102		
Eccles Line	Market Street	222		
	Piccadilly Gardens	52		
	Mosley Street	92	Market Street	0
			Piccadilly Gardens	92
			St Peters Square	0
	St Peters Square	340		

Half of Mosley Street Station boarders' origins lie closer to St Peters Square. Mosley Street Station is the closest station for only 18% of weekday boarders and 11% of Saturday boarders. Market Street is the closest station for a fifth of weekday boarders and over a third of Saturday boarders, reflecting the higher proportion of shopping trips on Saturdays.

Half of weekday passengers' and almost all Saturday passengers' closest alternative station to Mosley Street is Piccadilly Gardens.

Table 15 shows the journey time and frequency differences that would result from the closure of Mosley Street Station for each demand segment. The walk times are observed values. In-vehicle times are based on published journey time information – taking account of the 1.5 minutes journey time saving of not stopping at Mosley Street Station and resultant reduced traffic signal delays. The generalised time differences assume that walking and waiting times are factored by 2.0 in line with appraisal guidance. The generalised time differences will be a smaller proportion of longer distance trips on each line section.

For the Combined Section (St Peters Square to Trafford Bar), following the introduction of the Metrolink Phase 3 extensions, there will be trams every 7 minutes from Market Street and every 4 minutes from Mosley St / St Peters Square. As a result there will be no journey time benefits of walking to Mosley Street from Market Street. However, there will be journey time savings through walking from Piccadilly Gardens to Mosley Street, which would offer more than twice the service frequency. Without Mosley Street Station passengers with origins close to Piccadilly Gardens would be expected to walk to Market Street to secure the frequency benefit. Passengers in the vicinity of Mosley Street would be expected to walk to St Peters' Square to secure the combined frequency advantage.

Table 15 Journey Time and Frequency Impacts of Station Closure, Borders

Line Section	Closest Existing Station	Without Mosley St	Walk Time (mins)	Wait Time (mins)	In-Vehicle Time (mins)	Generalised Time Difference (mins)	
Altrincham Line	Market Street		- 2.0	+ 5.0	+1.5	+7.5	
	Piccadilly Gdns		-1.5	+5.0	-0.5	+6.5	
	Mosley Street	Market St		+2.0	+5.0	+1.5	+15.5
		Piccadilly Gdns		+1.5	+5.0	-0.5	+12.5
		St Peters Sq		+4.5	0	-1.5	+7.5
	St Peters Sq			-4.5	0	-1.5	-10.5
Combined Section	Market Street		-	-	-	-	
	Piccadilly Gdns		+0.5	+3.0	+3.0	+10.0	
	Mosley Street	Market St		+2.0	+3.0	+3.0	+13.0
		Piccadilly Gdns		+2.0	+3.0	+3.0	+13.0
		St Peters Sq		+4.5	0	-1.5	+7.5
	St Peters Sq			-4.5	0	-1.5	-10.5
Eccles Line	Market Street		-2.0	+5.0	+1.5	+7.5	
	Piccadilly Gdns		-1.5	+5.0	-0.5	+6.5	
	Mosley Street	Market St		+2.0	+5.0	+1.5	+15.5
		Piccadilly Gdns		+1.5	+5.0	-0.5	+12.5
		St Peters Sq		+4.5	0	-1.5	+7.5
	St Peters Sq			-4.5	0	-1.5	-10.5

For the Eccles Line the introduction of a service from Media City to Cornbrook will result in a reduction in the journey time benefits of using Mosley Street Station from around 29 minutes to only 5 / 6 minutes through interchanging at Cornbrook station for some passengers, assuming an interchange penalty of 10 minutes (and no benefits if the interchange penalty is only 5 minutes which may be justified by the reliability of Metrolink services). Therefore only around half of Eccles Line passengers would experience the disbenefits of the station closure (or benefit of station retention) given in Table 15.

Tables 13 and 14 showed a substantial number of passengers with origins closer to St Peters Square using Mosley Street Station. Table 15 suggests that they would receive benefits as a result of the station closure. This is illogical and further analysis of the survey data revealed that a significant proportion of these trips were transferring from bus stops. The postcodes suggested that the stops were on Princess Street and Booth Street / Nicolas Street either side of Mosley Street. However, the public transport network map for the City Centre suggests that the Booth St / Nicolas St stops could be on Charlotte St and York St – closer to Mosley Street Station. Table 16 shows the numbers of trips involved on weekdays and Saturdays. Without Mosley Street Station these passengers might walk to Market Street or Piccadilly gardens or walk to St Peters Square. It is assumed that retention of Mosley Street Station would result in 5 minute time saving for these passengers.

Other passengers using Mosley Street Station with an origin closer to St Peters Square must be securing some marginal advantage in using Mosley Street Station, such as securing a seat or being able to board the first tram in congested periods. The Phase 3 investment will provide significant additional capacity south of St Peters Square so the analysis excludes these trips.

Table 16 Analysis of Bus Interchange Trips

Line Section	Nearest Stn St Peters Square	Origin 'Bus Stop'	Possible York St / Charlotte St
Weekdays			
Altrincham Line	1172	798	550
Combined Section	124	89	39
Eccles Line	512	435	267
Saturdays			
Altrincham Line	483	453	303
Combined Section	102	92	51
Eccles Line	340	308	208

Tables 17 and 18 present the breakdown of passengers alighting at Mosley Street for weekdays and Saturdays. The tables also show the breakdown of St Peters Square data split by origin Bus Stops.

Table 17 Weekday Alighters' Nearest Station With and Without Mosley St

Closest Existing Station		Without Mosley St	
Market Street	60		
Piccadilly Gardens	120		
Mosley Street	30	Market Street	0
		Piccadilly Gardens	15
		St Peters Square	15
St Peters Square	180		
		Princess St Bus Stop	15
		York St / Charlotte St Bus Stop	75

Table 18 Saturday Alighters' Nearest Station With and Without Mosley St

Closest Existing Station		Without Mosley St	
Market Street	108		
Piccadilly Gardens	0		
Mosley Street	48	Market Street	0
		Piccadilly Gardens	48
		St Peters Square	0
St Peters Square	156		
		Princess St Bus Stop	48
		York St / Charlotte St Bus Stop	108

Only 8% of weekday and 15% of Saturday alighters destinations are closest to Mosley Street Station. It is likely that passengers' whose nearest station is Piccadilly Gardens have alighted from the Bury Line Metrolink service that does not stop at Piccadilly Gardens. Similarly, passengers' whose nearest station is Market Street may have used the Altrincham Line service from Piccadilly Station. Half of weekday and all of Saturday passengers whose closest station is St Peters Square are interchanging with bus services. It is assumed that the remainder have destinations between Mosley Street and St Peters Square stations.

Applying these assumptions the impacts of the closure of Mosley Street Station have been assessed for each user group in Table 19.

Table 19 Journey Time and Frequency Impacts of Station Closure, Alighters

Closest Existing Station	Without Mosley St	Walk Time (mins)	Wait Time (mins)	In-Vehicle Time (mins)	Generalised Time Difference (mins)
Market Street	Piccadilly Gardens	+2	0	-1.0	+3.0
Piccadilly Gdns	Market Street	+2	0	-3.0	+1.0
Mosley Street	Market St	+2	0	-3.0	+1.0
	Piccadilly Gdns	+1.5	0	-2.0*	+1.0
	St Peters Sq	+2.0	0	+2.0	+6.0
St Peters Sq Non interchange	St Peters Square	+2.0	0	+2.0	+6.0
St Peters Sq – Princess Street	St Peters Square	+1.0	0	+2.0	+4.0
St Peters Sq – York/Charlotte Streets	Market St / Piccadilly Gardens	+2.0	0	-2.0	+2.0

* average between Market Street to Mosley Street and Piccadilly Gardens to Mosley Street

A7 Passenger and Revenue Demand Forecasts

A7.1 Mosley Street Station Users

The result of the assessment of the journey time and frequency impacts of the closure of Mosley Street Station have been used to assess the demand and revenue impacts of the station retention option through application of generalised time assumptions for each line section. The average generalised journey times between stations on the line sections that would be affected by the station closure were calculated from published journey time information, interchange time including interchange penalty, origin wait time based on the service frequency in the Phase 3 network scenario and 12 minutes access / egress time. Interchange waiting time, origin waiting time and access / egress times are doubled to reflect passenger perceptions.

The journey time and frequency impacts were applied to the average generalised costs for each line section including a journey time elasticity assumption of -0.9 and applied to the interview data. Expansion factors of 1.07 weekday and 1.3 Saturday were applied to expand to the whole day⁵ and expansion factors of 5 for weekdays and 1.5 for weekend and 52 weeks per annum were applied. These factors were checked through analysis of ticket sales and season tickets for equivalent ‘survey days’ and all trips in 2006.

Table 20 shows the resultant additional patronage and revenue for Weekdays and Saturdays and annually – excluding the St Peters Square data and including a revenue factor of £1.37 per journey based on 2006 Metrolink ticket sales and season ticket data for Metrolink Phase 1/2.

These estimates ignore the potential for additional real-time information screens in the City Centre to reduce passenger walking and waiting times and therefore reflect a cautious scenario.

⁵ Based on MOIRA Rail Orcats Profiles for short distance Provincial City services

Table 20 Mosley Street Station Retention - Demand and Revenue Impacts

Line Section	Weekday Survey Additional Demand	Saturday Survey Additional Demand	Combined
Boarders			
Altrincham Line	177	110	
Combined Section	10	7	
Eccles Line	97	55	
Alighters	17	12	
Total Survey Day	301	184	
Annual Demand			102,801
Annual Revenue			£140,837

The results represent an 8% demand impact on the Weekday survey data and 9% impact on the Saturday survey data.

GMPTE provided demand matrices for station to station flows from their transport models for the Phase 1 / 2 network and Phase 3a network. The model forecasts an increase in trips boarding southbound from Mosley Street Station of around 34% in 2016 as a result of the new services / extensions providing new travel opportunities. The model also forecasts an increase in Mosley Street Station alighters of 142%.

As the retention of the station would be applied as part of the Phase 3a Metrolink scheme these factors are applied to the demand, revenue, benefits and non-user benefits relating to Mosley Street station users.

A7.2 Through Trips

The demand forecasts need to take account of the impact of the additional station stop in the retention option. The generalised time analysis was applied to the trips passing through the station using the station to station matrix provided by GMPTE. The analysis assumed a 90 second delay through the need to decelerate, dwell at the stop, accelerate and wait for the traffic signal at the York Street junction.

The model forecasts a patronage loss of 122,261 per annum and £167,498 revenue loss, a 3.6% decrease for the affected flows (flows between Bury and the City Centre travelling to stations south of Mosley Street). However, account needs to be taken of the planned investment in additional Metrolink services. GMPTE's forecasts of station to station flows following Phase 3a implementation the increase in through trips passing Mosley Street Station represent an increase of 120%.

A8 Costs, Cost Savings and Residual Liabilities

In the base (closure) option there will be costs associated with the removal of Mosley Street Station and creation of a wide pedestrian footway in its place. The costs are estimated as £300,000.

In the retention option there will be costs associated with the rebuilding of Mosley Street Station to the new design standards including ramped access and steps. The costs are estimated as £1,200,000. There is thus a net increase in capital costs of £900,000 in the retention option.

The capital costs are assumed to be equivalent to Network Rails GRIP Level 3 with 35% risk and assumed to be based on qtr 4 2008 prices. An Optimism Bias factor of 40% has been assumed.

In the retention option there will be ongoing station maintenance costs related to upkeep of the infrastructure including passenger shelters, lighting, CCTV, passenger help facility, real-time passenger information and fixed information including timetables, ticket machines (including regular cash handling and restocking tickets). A broad estimate of £20,000 per annum (2007 prices) has been assumed⁶ including contribution to periodic renewal / replacement costs through the economic appraisal period.

A9 Cost Benefit Analysis Assumptions

There are a number of economic benefits calculated for the evaluation;

- User Time Savings – existing and new Metrolink passengers;
- External – non-user benefits relating to;
 - Traffic decongestion impacts – as a result of the change in Metrolink demand some of which will have transferred to / from making journeys by private car;
 - Infrastructure maintenance cost savings / costs as a result of the change in traffic on the highway network;
 - Accident changes – resulting from the change in trips on the highway as a result of the mode shift to / from Metrolink, and;
 - Environment impacts attributed to changes in local air quality and greenhouse gasses relating to the mode switch to / from Metrolink.
- Indirect costs to Government as a result of changes in revenues from fuel taxes;
- Increase in operating costs and revenues above inflation over the project life.

A10 Existing and New User Time Saving Benefits

These benefits were forecast using the generalised time analysis of the survey data for Mosley Street Station users and the through trips analysis, expanded by the factors used for the demand and revenue forecasts. For new users the rule of half has been applied. The results are shown in Table 21.

Table 21 Existing and New User Time Savings, per annum.

Line Section	Existing User Time Savings (mins)	New User Time Savings (Mins)	Total
Mosley Street Station Boarders	7,627,064	273,474	7,900,538
Mosley Street Station Alighters	910,987	14,503	925,490
Through Journeys	-11,226,156		-11,226,156
Total			-2,400,128

⁶ Based on an internal Light Rail operating cost model

Over half of the user time savings accrue to Altrincham Line Users and over a third to Eccles Line Users.

The time savings are converted to monetary figures using the value of time assumptions given in the appraisal guidance⁷, including the specified light rail proportions of work, commuting and other trips. The value of time applied is £4.13 per hour in 2002 prices. The journey time impacts of the retention of Mosley Street Station are therefore valued as -£166,207 per annum in 2002 prices.

The estimates ignore the potential for passengers to minimise walking and waiting time in the base (closure) scenario as a result of the additional real-time passenger information displays. This is therefore a cautious assessment.

A11 Rail Safety Benefits (costs)

The economic evaluation takes account of the change in road accidents as a result of the change in highway traffic (see external benefits below) and the change in Metrolink accidents as a result of the change in Metrolink use. Table 22 shows the calculation – utilising the rail accident rates in the Rail Closures Guidance 2006 and the values of fatal and serious accidents from HEN1 2007.

Table 22 Rail Safety Benefits (costs)

Element	Values
Cost per Fatality (2005 prices)	£1,428,180
Cost per serious injury (2005 prices)	£160,480
Casualty Rate (Fatalities) accidents per passkm	0.000000005
Casualty Rate (Serious Injury) accidents per passkm	0.000000018
2008 New Metrolink Passenger km	-1.1m
2008 Rail Safety benefits (2005 prices)	-£6,212

A12 External Benefits

The non-user benefits have been assessed using the DfT Guidance on Rail Appraisal⁸ and associated spreadsheets. This procedure produced recommended values for congestion, infrastructure, accident, local air quality, noise and greenhouse gases impacts resulting from the assumed transfer of trips to / from car for 2008 and 2025.

The change in Metrolink passengerkms was computed for the new Mosley Street Station users through application of the weighted average trip length for each section of line. The station – station distance matrix was applied to the change in through trips. The change in car travel was computed assuming 20% transfer from car based on the results of the Metrolink Blockade Evaluation Study⁹ and assuming a car occupancy factor of 1.2.

⁷ TAG Unit 3.5.6 Values of Time and Operating Costs, DfT, April 2009

⁸ WebTAG Unit 3.13.2, Guidance on Rail Appraisal, External Costs of Car Use, DfT, April 2007)

⁹ GMPTE Metrolink Track Renewal and Blockade Evaluation Study, Jacobs Consultancy June 2008

The new Mosley Street Station users would create almost 73,000 additional Metrolink passenger kilometres per annum. However, the lost through journeys is forecast to remove 4.2m passkms leading to a net decrease of 4.1m passkms per annum. Application of the above assumptions resulted in an estimated increase of almost 1m car kms per annum.

The rates used and values derived for the external impacts are shown in Table 15, based on the DfT Guidance¹⁰ assuming car trips removed from / added to A-roads, in conurbations and assuming congestion band 3 on average (on a scale 0 – 5).

Table 23 External Costs of Car Use (Non-user benefits) rates / values.

Marginal External Cost	Rate p/pass car unit 2008	Rate p/pass car unit 2025	Value (£) 2008	Value (£) 2025
Congestion	15.00	19.90	-£38,798	-£61,654
Infrastructure	0.05	0.05	-£129	-£155
Accident	2.80	3.85	-£7,242	-£11,910
Local Air Quality	0.93	0.58	-£2,405	-£1,794
Noise	0.21	0.29	-£543	-£897
Greenhouse Gasses	0.37	0.35	-£957	-£1,083
Total			-£50,075	-£77,493

A13 Indirect Tax Cost to Government

The transfer of journeys from Metrolink to private car results in an increase in government revenue as a result of the increase in fuel sales and the resulting increase in fuel tax income. For this appraisal the value of this factor was estimated using the DfT Guidance on Rail Appraisal¹¹ spreadsheet which suggested values of 3.7p / car km in 2008 and 2.7p / car km in 2025 (which incorporates the DfT’s assumption that vehicles become more fuel efficient over time). While the use of this spreadsheet value in this context does not strictly follow WebTAG guidance, we feel that this represents a suitable simplified approach for this relatively minor scheme. Application of these factors to the increased carkms, results in estimated benefits of £9.5k in 2008 and £8.4k in 2025. The change being due to the demand growth assumptions, see economic appraisal assumptions section below.

A14 Operating costs and Revenue Growth

The appraisal assumes planned growth in Metrolink fares of RPI +1% and the assumed rise in operating costs of the same level. A revenue elasticity of 0.4 is applied to the fares increase to determine revenue growth.

¹⁰ DfT Guidance on Rail Appraisal: External Costs of Car Use (WebTAG Unit 3.13.2, April 2007)
¹¹ DfT Guidance on Rail Appraisal: External Costs of Car Use (WebTAG Unit 3.13.2, April 2007)

A15 Economic Appraisal Assumptions

The economic appraisal has been undertaken in accordance with the Rail Closure Guidance and the associated Guidance on Rail Appraisal, though some simplifications were made in relation to the assessment of taxation implications. Key assumptions were;

- 2002 price base and 2002 prices, deflating values using RPI factors;
- Risk factor of 35% applied to Capital Costs;
- Optimism bias factor of 40% applied to Capital Costs and 41% applied to operating costs.
- Discounted over 60 years of operation from 2012 to a 2002 base assuming a discount rate of 3.5% from 2002 to 2037 and 3.0% for the remaining years;
- Assuming a Metrolink passenger growth factor of 2% per annum for 2008 and 2009 growth and 1% per annum for all other years from the 2006 base of the model based on GMPTE advice;
- Assuming value of time growth from 2002 to 2071 in accordance with appraisal guidance¹²;
- Interpolation of the growth in external costs of car use (non-user benefits) between the forecasts for 2008 and 2025 with only rail passenger and value of time growth thereafter;
- Application of the 20.9% market price adjustment factor to the Capital Costs, operating costs, revenues and benefits assuming 1.2% business use¹³.

A16 Cost Benefit Analysis Results

The value for money assessment based on the benefit – cost ratio (BCR) as specified in the Guidance on Rail Appraisal (section 3.10.1) and is summarised in Table 19.

The BCR is the Present Value of the Benefits (PVB) divided by the Present Value of the Costs (PVC) where;

- $PVB = \text{Net private revenues} - \text{private costs} + \text{subsidies} + \text{grants} + \text{user benefits} + \text{non user benefits}$ and;
- $PVC = \text{cost to government}$
- $NPV = \text{Net Present Value}$

¹² WebTAG Unit 3.5.6, Values of Time and Operating Costs, DfT, April 2009, Table 3 Non-Work

¹³ WebTAG Unit 3.5.6, Values of Time and Operating Costs, DfT, April 2009, Table 7 Light Rail All week average.

Table 24 Benefit – Cost Ratio

Element	Present Values £m
Capital Costs	£1.26
Operating / Maintenance Costs	£0.71
Indirect Tax Costs	-£0.20
Rail Safety Costs	-£0.29
Revenues	-£5.25
User benefits	-£6.74
Non-user benefits	-£2.26
PVB	-£8.71
PVC	£7.01
BCR	-1.24
NPV	-£15.72

Whilst the retention of Mosley Street Station produces some user and non-user benefits for users of the station there is a net reduction in user and non user benefits and revenues leading to a negative BCR and forecast economic loss.

The Tables summarising the economic efficiency, public accounts and analysis of monetised costs and benefits are provided in Appendix C.

A17 Sensitivity Analysis

A number of sensitivity tests were undertaken to establish the sensitivity of the BCR to economic appraisal assumptions. These are summarised in Table 25. This shows that the appraisal is relatively insensitive to changes in capital costs, operating costs and taxation factors, but more sensitive to the Metrolink Phase 3a factors applied to the base year flows.

Table 25 Sensitivity Analysis Results

Test	BCR
Base	-1.24
50% increase in capital costs	-1.14
Removal of operating costs	-1.38
Removal of Metrolink Phase 3a factors	1.08
Reduction of Phase 3a through trips factor to 1.5	0.73
Increase of Mosley Street Boarding phase 3 factor to 2.0	0.72
Removal of Market Price Adjustment and Indirect Tax Factors	-1.46

The appraisal assumed the Phase 3a investment only. GMPTE has secured further additional funding to extend the network further to the south and east and additional through trips could therefore be expected in the future. Even if the level of through trips is significantly reduced, there is no economic case for retention of Mosley Street Station.

APPENDIX B APPRAISAL SUMMARY TABLE

Description: Retention of Mosley Street Station within Metrolink Phase 3a		PVC Cost: £7.08m		
OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE MEASURE (year 2005)	ASSESSMENT	
ENVIRONMENT	Sub-Objective: Noise	Slight increase in noise through deceleration and acceleration to stop at Mosley Street but no significant sensitive receptors.	No Impact	
	Local Air Quality	Change in mode split as a result of net change in Metrolink passengers and trip lengths	+0.40 NO _x tonnes/year +0.02 PM ₁₀ tonnes/year	Slightly Adverse
	Greenhouse Gasses	Reduced CO ₂ emission levels due to Modal Shift	+63.59 CO ₂ tonnes/year	Slightly Adverse
	Landscape	No Impact	N/A	No Impact
	Townscape	Removal of pedestrian footway space / café outside facilities, Creation of unattractive narrow / enclosed pedestrian walkway south of platform		Significant Adverse
	Heritage of Historic Resources	No Impact	N/A	No Impact
	Biodiversity	No Impact	N/A	No Impact
	Water Environment	No Impact	N/A	No Impact
	Physical Fitness	Slight decrease due to net loss of Metrolink passengers accessing stations by walking.	N/A	Slightly Adverse
	Journey Ambience	Reduced traveller stress including reduced frustration and route uncertainty for Mosley Street Station users, additional stress associated with stopping and reduced reliability for through passengers	N/A	Significantly Beneficial
SAFETY	Accidents	Road accidents increased through modal shift	Slightly Adverse	
	Security	No Impact	No impact	
ECONOMY	Transport Economic Efficiency	Return on investment	NPV = £-15.77m BCR = -1.24	
	Reliability	Reduction through additional stop and lack of priority through York Street signals	Slightly Adverse	
	Wider Economics Impacts	Loss of passing trade at Mosley Street may affect local business. Net reduction in Metrolink use indicates overall reduction in public transport quality and negative impacts in wider area.	N/A	Neutral
ACCESSIBILITY	Option Values	Other Metrolink Stations within 200m	N/A	
	Severance	No Impact	N/A	
	Access to the Transport System	Other stations within 200m. Extra access point to DDA standards provided benefits to mobility impaired.	N/A	Slightly Beneficial
INTEGRATION	Transport Interchange	Slight improved access to combined frequency of service southbound	N/A	
	Land-Use Policy	No impact	N/A	
	Other Government Policies	Slight net contribution to promoting culture, sport and tourism, improving connectivity and access to education.	N/A	Slightly Beneficial

Note: does not take account of provision of Real-Time information displays in Manchester City Centre to advise of 'next station to Altrincham' which would impact on the Journey Ambience factor.

APPENDIX C TEE TABLE, PUBLIC ACCOUNTS AND AMCB TABLE

Mosley Street Metrolink Station Retention

Table 1: Economic Efficiency of Transport System (revenues are scored as positives, costs as negatives)

	Total	Cars, LGVs and goods vehicles	Bus & Coach	Rail Total	Rail Company e.g. NR	Rail Other TOC/FOC	Rail e.g.
Consumers user benefits							
- travel time saving	- 8,545,531	1,801,633	-	6,743,898			-6,743,898
- Vehicle opcost	-						
- user charges	-						
- during construction & maintenance	-						
Net (1)	- 8,545,531	1,801,633	-	6,743,898	-	-	6,743,898
Business							
User benefits							
- Travel time	-						
- Vehicle opcost	-						
- user charges	-						
- during construction & maintenance	-						
Net (2)	-						
Private sector provider impact							
- revenue	- 5,247,926			5,247,926			-5,247,926
- opcost	- 711,388			711,388			-711,388
- investment cost	-						
- grant/subsidy	5,959,314			5,959,314			
- revenue transfer	-						
Sub total (3)	-						5,959,314
Other impacts							
- Developer contribution (4)	0						
Net business impact (5 = 2+3+4)	0						
Total, PV of transport econ eff. Benefits (6 = 1+5)	-8,545,531						

Note that subtotals (1) and (5) flow into the AMCB table. Subtotal (6) does not.

Table 2 Public Accounts (costs should be recorded as a positive number, surpluses as a negative one)

	All Modes Total	Road Infrastructure	Bus & Coach	Rail
Local Government funding				
- Direct Revenue	-			
- Op costs	-			
- Investment costs	- 4,520	-4,520		
- Developer and other contributions	-			
- Grant/Subsidy (k)*	-			
- Revenue transfer	-			
Net (7)	- 4,520	4,520	-	
Central Government funding				
- Direct Revenue	-			
- Op costs	-			
- Investment costs*	1,258,270			1,258,270
- Developer and other contributions	-			
- Grant/Subsidy (k)*	5,959,314			5,959,314
- Indirect Tax Revenues	- 204,317	-204,317		
- Revenue transfer	-			
Net (8)	7,013,267	204,317	-	7,217,584
Total PV of costs (9 =7+8)	7,008,747			

*The public sector costs in these boxes should exclude developer contribution e.g. developer contribution is subtracted from these figures to give Net (8)

Table 3: Analysis of Monetised Costs and Benefits (AMCB)

	Total	Road	Bus & Coach	Rail
Noise	- 26,215	-26215		
Local air quality	- 52,431	-52431		
Greenhouse gases	- 31,639	-31639		
Journey ambience (incl. rolling stock quality, and in vehicle crowding)	-			
Accidents (incl. safety)	- 53,177	-348032		£294,855
Consumer users (sub-total 1, Table 1)	- 8,545,531	1,801,633		6,743,898
Business users and providers (sub-total 5, Table 1)	-			
Reliability (incl. performance & reliability)	-			
Option values	-			
Interchange (station quality and crowding)	-			
PVB (a = sum of all benefits)	-8,708,993			
PVC (b = sub-total 9, Table 2)	7,008,747			
Overall impact, total				
- NPV (a-b)	-15,717,740			
- BCR (a/b)	-1.24			